氢原子产生电离能的原因

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摘要：氢原子为什么会产生电离能，我们这里找到一个看起来很简洁，或者说看起来很赏心悦目的答案。

关键词：氢原子，电离能，麦克斯韦方程组，万有引力常数。

氢原子为什么会产生电离能，因为我们宇宙的时空结构是这样的。

$$\frac{(h)(R_\infty)(c)}{(e_o)} = 13.6$$

$$= (\mu_o)(R_\infty) = \frac{(2\pi)(i)(\varphi_E)}{(4\pi)(R_\infty)(\varphi_B)}$$

$$= \frac{(2\pi)(i)(\varphi_E)}{(4\pi)(R_\infty)^2(\varphi_B)} * (R_\infty)$$

$$= \frac{(2\pi)(i)(\varphi_E)}{(4\pi)(R_\infty)^2(\varphi_B)} * \frac{(2\pi)(a_0)^2}{(m_{atom})}$$

$$= \frac{(2\pi)(i)(\varphi_E)}{(4\pi)^2(R_\infty)^2(\varphi_B)} * \frac{(4\pi)(2\pi)(a_0)^2}{(m_{atom})}$$

$$= \frac{1}{(\varepsilon_o)(4\pi)}\frac{1}{(c)^2} * (G_N)\frac{1}{(c)^2}\frac{(c)}{(m_{atom})}$$

$$= \frac{1}{(\varepsilon_o)(4\pi)}\frac{1}{(c)^2} * (G_N)\frac{(4\pi)}{(2\pi)^2(e_o)}$$

$$= \frac{(a_0)^2(c)^2}{(R_\infty)^2(e_o)} = \frac{(\nabla\cdot\mathbf{B})}{(2\pi)(\varphi_E)} * \frac{(\nabla\cdot\mathbf{D})}{(2\pi)(\varphi_C)}\frac{1}{(4\pi)(e_o)}。$$

有$(\varphi_B) = (e_o)$，$(\varphi_C) = (m_{atom})$，$(i) * (\varphi_E) = (c) * (\varphi_B)$，

所以，氢原子产生电离能的原因是$\frac{(a_0)^2(c)^2}{(R_\infty)^2}$，所以你可以把氢原子产生电离能的原因视为电磁和引力的“耦合作用”，并且这个作用是十分自然的。

它等价于$\frac{1}{(\varepsilon_o)(4\pi)}\frac{1}{(c)^2} * (G_N)\frac{(4\pi)}{(2\pi)^2} = \frac{(G_N)^2}{(2\pi)^2(4\pi)^2(R_\infty)^2(a_0)^2}$。

参考文献： https://doi.org/10.5281/zenodo.7741525。

The reason of hydrogen atom producing ionization energy

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Abstract: Why does hydrogen atom produce ionization energy? Here we can find an answer that looks very simple or very pleasing.

Key words: Hydrogen atom, ionization energy, Maxwell equations, gravitational constant.

Why does hydrogen atom produce ionization energy? Because the space-time structure of our universe is like this.

$$\frac{(h)(R_\infty)(c)}{(e_o)} = 13.6$$

$$= (\mu_o)(R_\infty) = \frac{(2\pi)(i)(\varphi_{\mathbf{E}})}{(4\pi)(R_\infty)(\varphi_{\mathbf{B}})}$$

$$= \frac{(2\pi)(i)(\varphi_{\mathbf{E}})}{(4\pi)(R_\infty)^2(\varphi_{\mathbf{B}})} * (R_\infty)$$

$$= \frac{(2\pi)(i)(\varphi_{\mathbf{E}})}{(4\pi)(R_\infty)^2(\varphi_{\mathbf{B}})} * \frac{(2\pi)(a_0)^2}{(m_{atom})}$$

$$= \frac{(2\pi)(i)(\varphi_{\mathbf{E}})}{(4\pi)^2(R_\infty)^2(\varphi_{\mathbf{B}})} * \frac{(4\pi)(2\pi)(a_0)^2}{(m_{atom})}$$

$$= \frac{1}{(\varepsilon_o)(4\pi)}\frac{1}{(c)^2} * (G_N)\frac{1}{(c)^2}\frac{(c)}{(m_{atom})}$$

$$= \frac{1}{(\varepsilon_o)(4\pi)}\frac{1}{(c)^2} * (G_N)\frac{(4\pi)}{(2\pi)^2(e_o)}$$

$$= \frac{(a_0)^2(c)^2}{(R_\infty)^2(e_o)} = \frac{(\nabla\cdot\mathbf{B})}{(2\pi)(\varphi_{\mathbf{E}})} * \frac{(\nabla\cdot\mathbf{D})}{(2\pi)(\varphi_{\mathbf{C}})}\frac{1}{(4\pi)(e_o)}.$$

Due to $(\varphi_{\mathbf{B}}) = (e_o), (\varphi_{\mathbf{C}}) = (m_{atom}), (i) * (\varphi_{\mathbf{D}}) = (c) * (\varphi_{\mathbf{C}})$,

Therefore, the reason for hydrogen atom to produce ionization energy is $\frac{(a_0)^2(c)^2}{(R_\infty)^2}$, so you can regard the reason for hydrogen atom to produce ionization energy as the "coupling effect" of electromagnetism and gravity, and this effect is very natural.

It is equivalent to $\frac{1}{(\varepsilon_o)(4\pi)}\frac{1}{(c)^2} * (G_N)\frac{(4\pi)}{(2\pi)^2} = \frac{(G_N)^2}{(2\pi)^2(4\pi)^2(R_\infty)^2(a_0)^2}$.

Reference: https://doi.org/10.5281/zenodo.7741525.